

AIR HISTORICAL BRANCH

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TRANSLATION NO. VII/VI.

A TACTICAL APPRECIATION  
OF THE AIR WAR IN TUNISIA

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I.

A survey of the tactics employed in  
the air war in Tunisia.

A. The political and military conditions on both sides.

After the failure in 1941 of the German Middle East pincer movement, one flank of which was to move across the Caucasus, the other through Egypt, and the Suez Canal, the British and Americans took the initiative in the Mediterranean.

As Mussolini pointed out, the Vichy Government was eager to maintain friendly relations with America and offered its support to them.

(Note: from a letter from Fieldmarshal Kesselring to Major General Jeschonnek on 5.11.42.) The Axis powers remained ignorant of this until November 1942. Germany was convinced that Vichy France genuinely opposed the allies in French N. Africa, believing that the French could only keep their colonies safe from American Imperialism with German help.

Confronted with Germany's strong military position along the Channel coast and in Northern Europe, the Western Powers had no alternative but to break into the fortress of Europe from the Mediterranean, if they were to keep their promise of a second front to the U.S.S.R. It was therefore the military strength of the Germans in Northern and Western Europe which forced the enemy's next aim upon him, which was, in the words of Winston Churchill, "to knock Italy out of the war". This was to be achieved by a preliminary air offensive followed up by an invasion.

Fieldmarshal Rommel's troops were, however, still firmly established in Egypt and the Straits of Messina were closed to British shipping. This considerably increased British shipping difficulties which were already great owing to German U-boat activities.

For the above reasons, the battle in the Mediterranean following the Allied landings became a fight for suitable air bases, in which both sides participated.

Due to their inferiority on the sea, the Axis powers were badly in need of airbases from which to strike at the Anglo-American landing operations; the aim of the Western powers was similar, to obtain operational airbases from which to launch their strategical air attacks against the Southern part of the fortress of Europe. Troop movements by both sides, can only be regarded as a part of the whole strategy of the campaign. The air force also played a considerable part in the tactical achievement of this strategical aim.

B. The Tactical Possibilities of the Luftwaffe.

All the various types of air combat had a decisive influence on the outcome of the land battles. The final decision was fought out on the ground, but the effect of the air war on supplies and morale had already determined the outcome of the battle.

As has been already stated, the Axis powers were numerically inferior in N. Africa and on the seas, and the Luftwaffe was their only means of bringing up the necessary forces to the battle front. It was decided not to use the Italian fleet, and specially her big ships, against the N. African landings because the Italians were of the opinion that their

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fleet could not meet a numerically equal English naval force without suffering heavy losses which in turn would cause fuel difficulties for the African supply convoys. This view was shared by the German naval command in Italy. The German Naval staff, however, did believe that it would be well worth while to attack at least the enemy's supply routes with strong naval forces, but their advice was ignored. The German air force was also called upon to safeguard the supply routes to Africa. It was expected that these would be heavily attacked on the sea and from the air, and that the scale of their attacks would increase as the enemy advanced along the North Africa coast and established bases nearer to the front. Our air operations were directed at slowing down the enemy advance, in order to give our military leaders the chance to establish large troop concentrations and supply bases in preparation for a later offensive.

Our aim was therefore to disrupt enemy supplies, for otherwise the enemy would have been able to bring up the bulk of materials produced by two world powers. Under such circumstances the outcome of the battle would have been a foregone conclusion, despite the heroism and moral superiority of our troops.

The safeguarding of our own supplies was the secondary aim of the Luftwaffe. Because of our numerical inferiority, both these aims could only be achieved, by taking the offensive, since only then, by concentrating all our forces in the attack, could we gain at least temporary and local air superiority.

The enemy air force was given its targets in the same priority as ours:

1. Attacking the supply columns of the Axis powers.
2. Safeguarding the Anglo-American supplies by attacking the German air bases and also by concentrating strong anti-aircraft defences round strong points such as supply bases and supply vehicles.

C. The various arms used by the Luftwaffe in the battle of Tunis.

BOMBERS

In every air force, attacks on targets of strategical importance are carried out by bombers. Offensive operations can quickly force a decision whereas defensive tactics can only aim at the attrition of the enemy. This shows what a long drawn-out affair such a war can be, especially in a fight between countries having formidable quantities of modern war weapons and a corresponding capacity for war production. In addition, in modern warfare the defender usually suffers heavy losses.

Mussolini sized up the situation correctly after hearing the first reports on the arrival of the enemy landing fleet in Gibraltar harbour on November 6th.

(Note: From a letter from Fieldmarshal Kesselring to Major General Jeschonnek on 5.11.42.) He judged that it would not be possible to repel the allied invasion, even assuming the greatest success by U-boats and the air force, and partly successful landing was therefore unavoidable.

During the attacks on the landing operations, the German bomber formations came up against technical difficulties of which the enemy took full advantage. In day time the convoys moved along just out of range of our bombers. They covered the remainder of their route, to the place where they were to unload,

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by night. The landing itself took place out of range of our fighters, so that our bombers were unescorted when they met the enemy fighters. These at first took off from a/c carriers and later, from hurriedly built landbases.

By way of an explanation it may be added that the units operating in the Mediterranean in the autumn of 1942 were equipped with Ju.88's with a carrying capacity of 1000 kgs. at a range of 850 kms., or a carrying capacity of 750 kgs. at a range of 1000 kms. In the case of aircraft with armament type B the above figures are slightly smaller, because although those aircraft have a higher maximum speed, their pay load is smaller than that of the above mentioned type C, on account of the bomb suspension inside the fuselage.

As the first landings were carried out at Casablanca, Port Lyautoy, Oran and Algiers, attacks on the landing fleet were difficult owing to the great distance to be covered from air bases.

Supply bases for enemy troops were first built along the coast of Morocco; the Allies realized that this greatly lengthened the supply routes, but that the scope of Luftwaffe activities would be limited. Heavy bombers have a far greater chance of success when operating against harbours or ships than when bombing columns or other single targets. Fighter bombers and T.E. fighters are most suitable for the latter, but these could however not be used because of the great distances.

The dangers which in wartime normally arise on long supply routes (threat from partisans, lack of transport vehicles, excessive consumption of petrol) were in this case eliminated, since for all practical purposes the enemy were fighting in their own country and had vast quantities of materials and petrol at their disposal.

In spite of considerable successes achieved by the German and Italian air forces and fleets, the enemy advance continued. Owing to the weakness of our ground forces, our air force, including those squadrons which were originally intended exclusively for strategic missions, had to be thrown into the defence of Tunis during the first allied attack at the end of November 1942.

Experience has shown that the effects of attacks carried out by numerically inferior bomber formations on targets on the battlefield are small, because the enemy can protect himself to a considerable degree by dispersing and camouflaging the individual targets. Our lack of ground straffer forces, and the tense situation on the battlefield where the issue hung in the balance, necessitated the use of these tactics.

In the long run this system proved to be disadvantageous, as the enemy was able in spite of our attacks to make full use of his supply system. Up to the end of December 1942, the transports landing troops and war materials on the French N.African coast, had totalled a gross tonnage of 2,6 million, BRT. During the same period the Axis forces had sunk 300.000 BRT of shipping, half of which can be assumed to have been empty transport vessels returning from Africa.

With our air force engaged in giving support to the numerically weak ground forces, we lacked planes for attacks on strategic targets. This taught us the following lesson:- Even during a phase of the war during which the battles are fought almost exclusively in the air, it is essential to have adequate forces available for the protection of air force ground installations

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A strong air force alone can never be directly responsible for forcing a decision; it can only do so indirectly, by striking at, and interfering with, the supplies of the enemy. In some theatres of war there have been apparent exceptions to this rule, and air attacks have forced a decision. These exceptions do not however disprove the rule; they can only occur when the attacked nation suffers from low morale and is unprepared for war. In the normal course of events, the final decision is always fought out by the infantry.

There is no doubt that in the Tunisian campaign the weakness of our ground forces was primarily due to political conditions. The poor organization of the supply system in the Mediterranean - a task assigned to the Italian fleet - was entirely due to political dissensions among our late allies. The Italian navy displayed little enthusiasm for the battle and after losing many of her light warships in the first years of the war, kept back the remainder of her escort vessels, and the escort of our convoys was therefore left to the bombers. This meant additional wear and tear on the aircraft, greater demands placed on crews and a higher consumption of petrol, and apart from this on each day on which a convoy had to be escorted by bombers, one "Gruppo" less was available for bombing operations. Whenever a crisis arose in the supply system due to bad weather conditions etc., bomber aircraft had to bring up the petrol supplies.

All these factors weakened our squadrons destined to smash the enemy supply installations and vehicles. Nevertheless, the importance of attacking the enemy's supplies was realized when it became clear that the enemy were not attempting an immediate breakthrough but were carefully preparing for an attack.

In the course of the campaign our own air force flew fewer and fewer missions against the enemy supply routes. Intensified activity on the part of the enemy air force made attacks on their ground organisation necessary and in addition Rommel's tank army had to be given air cover in their attempted break-away from the enemy; this latter task was often performed by formations of Ju.88's.

In February alone, 15 attacks were carried out on Tripoli harbour, an important enemy supply base. Contrary to their report to the Duce, the Italian navy had failed to destroy the harbour installations sufficiently to make further use impossible before abandoning the harbour.

With the enemy's improved defence system which made it possible for convoys to sail along the African coast under constant air cover and to lie at night in heavily defended harbours, our successes gradually decreased. The improvement of the Anglo-American Radar network for reporting approaching aircraft probably played an important part in this defence system.

With the end of the Tunisian campaign the G.A.F. began to operate nearer and nearer to the front line in order to give our ground forces adequate support. On account of the volume of enemy merchant shipping, our successes were only pinpricks in the battles on the Tunisian battlefield in spite of the very creditable performances of the bomber formations concerned. Only within the frame of the campaign as a whole, taking into account the war waged by the German navy on the seas, can their efforts be duly appreciated. Our bombers forced the enemy to put up large numbers of planes and ships for defence purposes in the Mediterranean.

Since our fighters were required for many tasks, they were not always able to escort the bombers. The latter was therefore forced to confine their activities mainly to night

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bombing during the months of April and May. Their successes against landing craft, airfields and troop concentrations are difficult to assess, but they were probably not great.

Concerning the bomber attacks as a whole little will be said. Owing to the large area of operations, the range of our attacks and the bomb loads carried proved to be insufficient. Italy's uncertain attitude meant that our attacking forces had to be split up for various other important missions such as escorting convoys and supporting the army on the battlefield.

The enemy's weakest point was, like ours, the supply system, and here we had the greatest chances of success. Our war leaders realized this and our bombers carried out their missions with great courage and individual successes were numerous. That they were not in a position to force a favourable outcome of the whole campaign was due to political difficulties whose solution could not be effected by our military commanders and troops.

### FIGHTERS

The day and night fighters, the only branch of the air force engaged in offensive operations, were set the following tasks: -

1. To gain air supremacy over the bridgehead area itself, its supply routes and its supply and air bases.
2. To escort our bombers and generally to protect our supply convoys by sea and in the air.

At the start of the campaign the enemy had an insufficient ground organization and consequently a weak air force, and under those conditions it seemed possible for our fighters to gain air supremacy. This task was, however, only partly accomplished because the enemy was waging an offensive war even with the small forces at his disposal, placing a heavy strain on our fighters who had to defend the harbours and transport vessels.

Based on reconnaissance and battle reports, the strength of the Anglo-American air forces in the battle area at the end of November was estimated as follows: 50 fighters, 20 twin-engined bombers, a number of 4-engined bombers (up to 12 seen at a time). On 13 airfields in Algeria about 600 aircraft had been spotted.

At the same time 142 aircraft were based on Malta, of which 102 were single engined, 35 twin-engined, and 5 torpedo aircraft. By the beginning of December this strength had increased to 226 aircraft, of which 126 were fighters and 100 were bombers. The attacks on the Tunisian harbours together with carefully planned reconnaissance of the Axis Supply routes, were mainly carried out from Malta.

(Note: from a letter from Fieldmarshal Kesselring to the Reichsmarshal).

As the enemy established his air bases nearer and nearer to our territory and strengthened his air forces in the Mediterranean, more and more of our fighters became engaged on convoy escort duties. The first withdrawal of the Italian tank army from the Mareth line to the Enfidaville position reduced the bridgehead considerably. This enabled a concentration of troops in the area which greatly facilitated its defence, but as pointed out by Fieldmarshal Kesselring in his situation report of 3.3.43., the enemy's numerical air superiority was brought to bear on the bridgehead to such an extent that gradually our ground forces were smashed up and the supply routes to Tunis and Biserta closed.

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Our own air force lacked forward airfields, and could never be kept long enough in this area. With the advance of their bases, the enemy fighter bombers were in a position to attack our supply vessels, necessitating the use of still larger forces of fighters for convoy escort duties. Having the advantage of the initiative, the Anglo-Americans were always able to gain air supremacy by temporarily concentrating their forces in a definite area, even after our fighter strength had been increased.

Some comparisons are shown between the Axis fighter strength in the Sicilian Straits at the end of April 1943 and that of the Allies at the same time. The Germans had 345 S.E. fighters of which 237 ready for operational use. In Western Sicily were based 89 T.E. fighters, 72 of which were operationally ready. The Italians had 339 fighters; of which 118 operational. Only some of the aircraft based on Sicily and Sardinia were suitable and ready for operations in the straits of Sicily and many obsolete types of Italian aircraft have not been included in the above figures. We had altogether 835 aircraft including reserves.

On airfields in Western Algeria and in Southern Tunisia the enemy had over 1080 fighters able to operate in the straits of Sicily, including a number of T.E. fighters. Altogether 360 planes were ready for immediate operational use.

In view of the difficult air situation, Mussolini requested the Fuhrer to reinforce the German fighter armies in Italy; this request could however not be met because of the badly prepared Italian ground organization. The small number, bad condition, and consequent overcrowding of these airfields led to higher losses on our side which have gravely affected our operational readiness.

The following number of aircraft were based on airfields in Sicily, on 1.5.43.

Trapani	148 German aircraft
Chinissia	18 German and 50 Italian aircraft
San Pietro	82 German aircraft
Comiso	122 German and 6 Italian aircraft
Catania	124 German and 22 Italian aircraft

This overcrowding of airfields which should only have had 70-80 aircraft based on them, naturally led to heavier losses each time the enemy carried out a raid on one of them, and any attempt on our part to increase the numbers of aircraft brought increased danger with it. In spite of great care this overcrowding was unavoidable. All the airfields were situated in rich agricultural areas, some of them near valuable olive groves, so that it was impossible to disperse any aircraft over this terrain. The heavy bomb loads dropped by the enemy 4-engined formations damaged all the aircraft based on the attacked airfields, even those lying in reinforced hangars.

In the last days of the Tunisian campaign the enemy had complete air superiority. The Anglo-American air force also played a large part in the land battle whose outcome was the annihilation of the Tunisian bridgehead. To a larger extent than ever before allied planes took part in the ground battle, thereby increasing the striking power of the advancing forces, and straining the power of resistance of our armies.

Our fighter force did not operate to the limits of its capacity. Here again, as in the case of the bomber operations, the fault lay not with the High Command nor with the crews, but

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was due to the peculiar nature of the Mediterranean campaign. The fighters could only accomplish their task by taking the offensive. Since, however, a large number of fighters was continuously engaged on convoy escort duties, they could play no active part in the battles for air supremacy. The use of fighters was a direct alternative to that of bombers, the main factor in air power, because the latter were numerically insufficient for attacks on the enemy ground-organization on account of the many unforeseen special tasks to which they were assigned.

#### FLAK UNITS

The Flak units fulfilled their purpose in defence operations. As the Italian Flak units were badly equipped, of low morale, and insufficiently trained to withstand modern air attacks, the bulk of the static air defence fell on the German Flak units.

As the enemy's primary aim was to establish an air base in Tunis, the protection of our harbours and ground organization acquired a special importance. Apart from material destruction, the air attacks on Tunis and Biserta had an effect on the morale of the inhabitants. The air raid warnings issued by the Freya stations came too late, because Biserta had only one Freya whose beams were directed to the West, while the attacks invariably came from Malta. As a result of this inadequate warning system panic broke out among the population who immediately left their places of work. At the start of the campaign the Italian population of Tunis had offered General Nehring 20,000 men for voluntary work, helping with the unloading of ships in the harbours etc., but for the above reasons these workers proved to be useless. On November 23rd, 26 volunteers out of the 20,000 Italians reported for duty.

The Flak units (19th Flakdivision) attached to Rommel's tank army had already for some time been in the thick of the land fighting. The air defence of Tripolitania was carried out by the Luftgaustab Z.B.V. Afrika. Flak division 20, which originally had been entrusted with the defence of our ports and their unloading installations, was between February and the end of the campaign in May gradually forced to reinforce those Flak units which were engaged in land fighting. This action was due to the steadily deteriorating position on land, and was taken in spite of increasing enemy air activity.

In Sicily our supply and air bases were defended by 2 Flak Regiments (Regimenter). The use of Flak units for land fighting was in contradiction to the principles of our commanders, and particularly so at a time when the enemy had such unchallenged air superiority, but in this particular case the action was justified. The final decision is always fought out on the ground. Even an effective defence of strongpoints and bases sometimes fails to have any bearing on the final outcome of the battle, if the opposing forces succeed in occupying the bases as an alternative to bombing them. Every war leader must make it his aim to prevent this.

Apart from this factor, it must be pointed out that the Flak units at our disposal in Tunisia were insufficient to withstand the full onslaught of the enemy air forces. This was probably due to transport and shipping difficulties.

#### GROUND STRAFERS

As the battlefield extended over a large area, and the two fronts consisted very often only of widely dispersed strongpoints,

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ground strafers with their great mobility and their effective armament began to play an important part in the land fighting. Dive bombers, fighter bombers and fighters carried out attacks on air bases, roads, railways, road transports, Flak positions, tank and vehicle concentrations, camps, and any other concentrations or movements of troops and materials near the front lines. By smashing the enemy spearheads they made it possible for the army to take up their position on the Mareth line, a movement which was, however, hampered by lack of petrol.

Support was given to our troops in local battles, in which both sides were fighting to improve their positions. The rapid switching over from defensive to offensive operations and vice versa frequently put a heavy strain on commanders and troops. In April, the Luftwaffe provided air cover for the Italian light armoured divisions breaking away from the enemy, by low level attacks on troops and fortified positions. Tank buster squadrons destroyed a number of tanks. A considerable number of bases were lost when the bridgehead was reduced, and from those airfields on Pantellaria and in Southern Sicily which were still in our hands, bombers frequently took off under fighter cover, owing to the strength of the enemy fighter force.

To sum up, the ground strafers accomplished their task. By concentrated attacks they gave valuable support to the army and frequently influenced the outcome of the battle. They slowed down the enemy troop movements. In all these operations they followed the plan of our High Command, which, having abandoned its original plan of taking the offensive, was trying to gain time, in which to complete our defences in Europe before the expected landing there took place. The battles in Africa pinned down large enemy forces and thus prevented them from taking part in any other offensive in the Mediterranean.

The ground strafers were, like rest of the Luftwaffe, affected by Italy's uncertain and wavering position. The bridgehead had to be reduced because of the weakness of the ground forces. This was due to a shortage of supplies which the Italians, for political reasons, brought up in insufficient quantities. As the bridgehead was being reduced we lost the majority of our airfields and this meant that our aircraft could no longer operate at short range.

#### RECONNAISSANCE UNITS

During the whole of this phase of the war, the reconnaissance units did very good work and were a reliable weapon to those who planned the campaign. They laid the foundation for the attacks on the first supply convoys and even in the face of Anglo-American air superiority, brought back all the necessary reconnaissance results.

In April and May they played a particularly important part in patrols over the Algerian harbours where the invasion fleet lay assembled, as an enemy landing behind our lines in Tunisia with the aim of speeding up the Anglo-American advance was expected.

#### AIRFIELDS

Our ground organization was to a great extent based on the Italian airfields in Southern Italy and Sicily, a fact which led to many difficulties. These airfields were numerically insufficient and too small in size to meet the demands of the air war in 1942/43. They lacked space for the movement and dispersal of aircraft, and the enemy was consequently often able to destroy

the plans on the ground after a preliminary reconnaissance. Political difficulties and ambiguous orders among the Axis powers provided the anti-German and anti-Fascist Italian elements with ample opportunities for sabotaging the German air operations.

We were unable to take the necessary steps for improving runways, building fortified hangars etc. with the rapidity necessitated by the course of the battle, being hampered by a lack of manpower and hamstrung by the Italian authorities, especially where money matters were concerned. Supply difficulties had also a restricting influence on our operations. Because of enemy air attacks on railways and harbours even the supplies for the air force in Sicily had to be cut by one third of the amount originally planned. (22,900 tons planned, 15,576 tons actually sent). We were not in a position to increase the numbers or the operational efficacy of our aircraft substantially until our ground organization and its defences could be improved and expanded.

As the airfields were often right on the coast they were difficult to defend because the anti aircraft guns in such cases had no forward positions, and enemy bomber formations approaching high above the sea could drop their bombs out of range of our Flak.

AIR TRANSPORT

As the sea routes were unsafe owing to the inferiority of the Italian navy, transport aircraft became more and more important as the Mediterranean campaign progressed. Their importance increased while we raced against the enemy in an attempt to establish the Tunisian bridgehead and to hold it, by providing a useful means for speeding up the arrival of supplies.

It was, however, not possible to bring up substantial quantities of supplies to an army unit solely by air. The sea routes still had to bear most of the burden, as will be seen from the following figures:-

Sea transport. (Unloading in Tunisian harbours).

	<u>February</u>	<u>March</u>	<u>April</u>
<u>Supplies</u>	34,000 tons	35,386 tons	18,690 tons (all supplies)
<u>Petrol</u>	14,500 tons	14,300 tons	
<u>Vehicles</u>	2000	1,114	
<u>Personnel</u>	33,800	19,000 Germans 11,000 Italians	23,000

Sea transport losses.

	<u>February</u>	<u>March</u>	<u>April</u>
<u>Supplies</u>	9%	13.5%	approx. 50%
<u>Petrol</u>	23%	26.7%	
<u>Vehicles</u>		27.9%	

Air transport. (To Tunisia).

	<u>February</u>	<u>March</u>	<u>April</u>
<u>Supplies</u>	4,000 tons	8,000 tons	5,400 tons
<u>Personnel</u>	11,000	12,000	9,300

Losses for April 1943: 123 Ju.52, 23 Me.323, 4 Sm 82.

Air transport successfully supplemented sea transport, especially in unfavourable weather, and during supply crises by bringing up troop reinforcements and much needed supplies. In time the enemy adapted himself systematically to fighting the Ju.52 units and consequently forced us in April to bring up a large part of our air supplies carried by night. Nevertheless in April air transport gained in importance because during this month our sea losses rose to nearly 50%. In the long run not even air transport could relieve the supply crisis and alter the fate of the army in Africa.

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Our experience in the Tunisian campaign has shown that only countries who have a large aircraft industry and sufficiently large quantities of petrol and men can supply great armies from the air. Air transport requires an extensive and highly developed ground organization and demands adequate escort, and even then delivers only relatively small quantities of supplies judged by the standards of present day warfare.

When fighting a strong air opponent who is in a position to protect his transport aircraft with a superior fighter force and at the same time to attack the enemy ground organization with bombers, air transport can only be conducted at the cost of excessively high losses.

It is satisfactory only over short distances and for such operations as bringing up supplies to small units which have broken away from the enemy, or have been encircled, such as parachute or airborne troops, or the spearheads of mechanised columns. In its present stage of technical development, air transport cannot have a decisive influence on the outcome of a battle between two air forces of approximately equal strengths.

#### SIGNALS

By its very nature, the Signals Corps received little publicity. The Corps maintained communications between Europe and Africa, and on the battlefield itself between the commanders and the troops; it built up the raid reporting services and in March and April prepared for the operations of radio controlled night fighters in the straits of Sicily.

As was to be expected in a fight between two nations both of which possessed highly developed Radar and wireless systems, the signals units performed numerous duties in connection with Radar and W/T interception. W/T interception gave our commanders valuable information on the strength and location of the enemy forces in the Mediterranean. Our jamming stations in Sicily, North Africa and Pantellaria hampered the efficacy of the Radar station on Malta, which was also equipped with a shipping detecting apparatus.

In general, the signals units have carried out their duties satisfactorily. Signals communications functioned smoothly, and the safety of our ships and convoys by means of W/T and the jamming of enemy signals was assured to the fullest extent possible.

The shortcomings of the Freya reports were due to the lack of an adequate number of Freya stations in Tunisia, resulting from the limited carrying capacity of our sea convoys. As far as can be judged from the reports at hand, the apparatus at the disposal of the signals corps was completely satisfactory from the technical point of view.

#### ENEMY STRATEGY

Having surveyed the activities of the Luftwaffe, it is interesting to note how the enemy air force achieved its aims in the campaign. By concentrating its strength, it formed the nucleus of the fighting in the Mediterranean.

The first attacks were directed against the Axis air bases, but gradually the enemy realized that supplies were the weak point of the Axis position in North Africa, and thereafter the weight of allied attacks was directed more and more against the ports where our convoys unloaded, the ships themselves, and against our air and supply bases in Sicily and Southern Italy.

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Simultaneously with this air offensive, the Allies were reinforcing their units and developing their ground organization. Apart from these raids made by the strategical air force, ground strafers continuously attacked our troops and other targets near the front line. In May the main force of the enemy air attacks shifted to tactical operations, but immediately after the end of the Tunisian campaign the strategical air war was resumed against Italy, with a view to causing material destruction and lowering the morale of the Italians.

The basic principles determining the sequence of the targets for attack were therefore uniform throughout the campaign; having assessed the situation correctly, and having recognized the weak points in the Axis position, the Allies concentrated their attacks on these weak spots. They were in a position to do this because for them the Mediterranean was the only theatre of war where important landfighting was in progress and where they hoped to force a favourable outcome of the whole war. The Axis powers on the other hand could not send as many forces as the supreme commanders would have wished to the Mediterranean in spite of its great importance.

#### D. Conclusion.

The battle of the Axis powers in Africa had ended with the collapse of the Tunisian bridgehead. The enemy air force now possessed bases in the Mediterranean from which it could successfully prepare and support the expected landing operations by attacks on our hinterland and troops. From now on the Reich with its European reserves became more and more threatened from the air.

In answer to the question why in spite of the excellent work done by commanders and troops the German air force did not succeed in achieving its ultimate aim, the following may be said. The support of our armies in the land battles whether performed indirectly by attacks on the enemy supply columns and by protecting our rear lines of communications or directly by attacks on the battlefield and behind the lines, made such varied and numerous demands on our air forces that these could not all be met.

The Italians' lack of enthusiasm for the fight, the lack of a uniform supreme command which might have forced the Italians to greater exertions, and the passive resistance of the Italian administration all laid extra burdens on our air force for which the latter was not prepared.

What was the cause of Italy's attitude? Following the conquest of East Africa and the end of the Spanish civil war, Italy found herself politically somewhat isolated. These events had inevitably exercised an effect on her home policy. The officers of the Italian army had often through family relationships considerable connections with international finance and Catholicism and were therefore opposed to Fascism. The present war was to some extent welcomed by these elements as providing an opportunity for preparing the overthrow of Fascism; which they believed to be only possible with outside help and the breaking of German resistance.

Under these circumstances German interference in Italy was not universally welcomed; it was regarded as a strengthening of Fascism and an unwelcome prolongation of an unpopular war and in addition, a secret propaganda campaign was being waged against Germany, prophesying Italy's future dependence on the Reich.

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The mentality of the Italians, which by now had very little in common with the fighting spirit of the ancient Romans, also played an important part. Mussolini's attempts to educate his people and to bring out the heroic qualities in their temperament never succeeded. He did succeed in inspiring a part of the Italian youth with a burning national consciousness and national pride, but even they lacked toughness and endurance in the long run.

After the landing in Algiers, the Italian officers slowly awakened from the stupor and shock with which the fact of a war on two fronts in the Mediterranean had inspired them. They had, however, little faith in the further development of the situation and saw even then that the most favourable solution of Italy's difficulties lay in her coming out of the war as soon as possible.

This political split in Italy was already great in the summer of 1942 and became even more noticeable when later on German operations were sabotaged, and co-operation with the German armies was politely refused.

The role played by the Italian navy was peculiar. One has the impression that the Italian High Command foresaw the loss of North Africa as inevitable long before the Germans did. For this reason supplies were being sent to the Italian positions in the Balkans in ships and with escort vessels which should have gone to Africa.

Political influences must also not be underestimated. Italy's endeavour to keep her fleet intact in order to use its very existence and its operational readiness as a means of exercising pressure on the future peace conference, definitely influenced the decisions of the Supreme Command during the African campaign. The fleet needed a number of light craft without which the heavy ships were unable to fight. The losses suffered by these light craft through enemy action in the first war years were doubtless heavy. The value of the remaining destroyers and escort vessels therefore rose in comparison.

A uniform command could have eliminated the greater part of these difficulties and causes of friction. The order issued on 15.2 appointing Fieldmarshal Kesselring the Fuhrer's deputy in the Central Mediterranean and entrusting him with the safeguarding of German influence over all armoured units in North Africa under the Comando Supremo did not provide the necessary opportunity for the German Command to exert its influence in all spheres.

#### SOURCES

LUFTFLOTTE 2 War Diaries and Orders.

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OKW orders and reports.